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ABSTRACT

This thesis describes an experimental study of the "motive to avoid success," as described by Matina Horner (1968), using sex, age, and sex of cues as independent variables. School-aged subjects (5th, 8th, 11th grade and college students) wrote stories in response to one of two written thematic apperceptive cues. The dependent measure was the presence or absence of negative imagery written in response to the verbal cue. A 2x2x4 completely randomized factorial design was used to analyze the data. A highly significant main effect for sex of cue was found. Both males and females recorded significantly more negative responses towards the female cue than towards the male cue. The "motive to avoid success" as an intrapsychic feminine phenomenon is questioned. An alternative explanation of response to traditional learned role-stereotypes is posited. The "motive to avoid success" appears to be less of an internal mechanism and more of a cue dependent response than previously indicated in the literature. (Author)

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THE MOTIVE TO AVOID SUCCESS STUDIED AS A FUNCTION OF SEX, AGE, AND SEX OF CUE VARIABLES

A THESIS

SUBMITTED TO THE GRADUATE EDUCATIONAL POLICIES COUNCIL

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by

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I. STATEMENT OF THE PROBLEM

It has been eight years since Matina Horner's original study identified a "motive to avoid success" (n Avoid Success) in college women (Horner, 1968). Such a motive was suggested as a possible explanation for the previous findings that "women generally fail to fulfill their intellectual potential" (Brown, Jennings, and Vanik, 1974, p. 172). Interest in this area of research has since been demonstrated by the appearance of many articles attempting to explain, refute, or expand on this particular motive.

This investigator has explored an area of related research which has been replete with contradictions. Several research studies were located which attempted to ascertain the age level at which the "motive to avoid success" appears to be most prevalent. Horner originally found that fear of success imagery following presentation of verbal Thematic Apperception Test cues (Murray, 1953) was most prevalent among high-achievement-oriented, high ability college women (Horner, 1968). Further work with different age samples indicated more negative success imagery at college than at high school or junior high levels (Horner, 1972). Brown, Jennings and Vanik (1974) compared high school and college students resulting in findings contradictory to Horner's. These researchers concluded that more negative imagery was expressed towards the female cue by high school males and females and by college males than by college females. Monahan, Kuhn, and Shaver (1974) also suggest that negative imagery towards the female cue appears to decline during adolescence.

The researcher in this present study suggests that the discrepancy in results of former studies could have been due as much to the design of the study as to any actual changes in cultural attitudes towards female achievement. The original Horner study was based on an incomplete design in which females responded only to female cues, males only to male cues. The Brown et al. study (1974) gave both female and male cue variables to each subject. It seems conceivable that this procedure confounded the single blind experimental condition which is imperative for studies involving sex differences. [It would be relatively easy for subjects to guess that the experiment involved a study of sex differences when both discriminatory cues to which they responded were identical with the exception of male and female names and pronouns.] The Monahan et al. study (1974) did not include a college population, omitting the very group in which Horner (1970) found the greatest degree of negative success imagery expressed.

In addition, a more recent Horner report (1972) indicates an increase in negative success imagery among males in the past four years while a high amount of female negative success imagery has remained fairly constant. Horner suggests that changing cultural values for men may provide a partial explanation of this result; however, there seems to be no concurrent trend nor any analogous change in values for women.

The purpose of this study is to replicate a portion of the original Horner study (1968) across age groups and cue variables in order to answer these three questions:

1. Is the "motive to avoid success" most evident among women?

2. Is there an increase or a decrease of the strength of the motive correlated with age?
3. Is there evidence of more negative success imagery among males compared to previous studies?

These three questions will be answered in the context of the following general hypotheses, expressed first as null hypotheses and then in terms of predicted outcomesbased on related studies.

Hypothesis 1. There will be no significant difference between male and female subjects in the amount of n Avoid Success imagery displayed. [It is predicted that females will respond with a significantly greater amount of negative imagery towards both male and female cues than will males towards both cues. Not only do women have lower expectations of achievement for themselves, but also, they display lower expectations for men than men do for themselves (Alper, 1974).]

Hypothesis 2. The age of the subject will have no significant effect on the amount of negative success imagery expressed. [It is anticipated that there will be a linear trend in the amount of negative success imagery present among age groups and that an increase in age will be accompanied by a corresponding increase in negative imagery among both sexes (Horner, 1972).]

Hypothesis 3. The type of cue used (male or female) will not have a significant effect on the amount of negative success imagery displayed. [As reported in Monahan et al. (1974), one may predict that the proportion of negative responses towards the "Anne" cue will be significantly greater than the proportion of negative responses towards the "John" cue, independent of the sex of the respondent.]

Hypothesis 4. There will be no sex by age interaction effects in the amount of negative success imagery expressed. [According to the theory pertaining to the "motive to avoid success", one may predict that females will respond with increasing amounts of negative success imagery as they mature. Although this occurs among males also, it is expected that the concurrence will manifest itself in a smaller degree (Horner, 1972).]

Hypothesis 5. There will be no sex by cue interaction effects in the amount of negative success imagery displayed. [Moderate interaction effects have been found in the literature in the direction of males showing a larger number of negative responses towards the "Anne" cue than the females towards the same cue (Monahan, et al., 1974).]

Hypothesis 6. There will be no age by cue interaction effects in the amount of negative success imagery displayed. [The literature is contradictory here in terms of the interrelationship of direction of negative responding with age towards the female cue: both decrements and increments with age have been recorded. However, it is agreed that the significant differences occurred in response to the "Anne" cue, not to the "John" cue (Horner, 1972; Monahan, et al., 1974).]

Hypothesis 7. There will be no three-way interaction effect (sex by age by cue) in the amount of negative success imagery measured.

II. REVIEW OF RELATED LITERATURE

The achievement motive as described by McClelland (1953) and Atkinson (1958) depends upon three concepts: (1) a stable amount of personal achievement motivation, (2) the expectancy of success in a certain task or area, and (3) the value the individual places on success in that area.

Historically, studies based on this expectancy-value theory of motivation revealed a positive correlation between the above three variables and the subsequent performance of that task. That is, under experimental arousal conditions where successful attainment of a goal appears likely, achievement-related fantasies should increase, producing high performance increments. The converse condition according to this theory implies that anticipation of negative consequences produces negative motivation to perform, resulting in a performance decrement (Atkinson & Feather, 1966). Horner explains this decrement as a function of anxiety which inhibits action (Horner, 1972).

It follows that males who valued achievement and were motivated toward achievement goals not only fantasized successful outcomes of specific goal-oriented tasks, but also performed well enough to achieve such goals.

Because the results from the original studies (performed on all male subjects) could not be replicated with female subjects, Atkinson observed that sex differences were "perhaps the most persistent unresolved problem in research on n Achievement" (Atkinson, 1958, p. 33).

More recently, research focusing on the unexplainable factors in female achievement, resulted in indicators of a statistically significant

sex difference in the arousal of the achievement motive. When achievement needs in an achievement-oriented woman conflict with what appear to be negative consequences as a result of that achievement, she will tend to respond in any one of numerous ways to avoid success (Horner, 1970). Subsequent performance measures are much lower than one would anticipate, especially in mixed-sex competitive tasks (Horner, 1968).

The most vivid illustration of this contradictory finding occurs in women with the highest levels of achievement orientation and ability. Such women repeatedly exhibit high fear of success imagery in a greater amount than other women (Horner, 1972; Schwenn, 1970). These results have been interpreted as suggesting that female achievement is considered by many women to be incompatible with traditional cultural values (Horner, 1968, 1969, 1970, 1972; Alper, 1974). The resulting fear of success imagery in high-achievement-oriented women has been interpreted by Matina Horner as illustrating a "motive to avoid success" defined as:

> an internal psychological representation of the dominant societal stereotype which views competence, independence, and intellectual achievement as qualities basically inconsistent with femininity, even though positively related to masculinity and mental health (Horner, 1972, p. 157).

In the past, the achievement motive has been studied under conditions where it is first aroused by pictorial cues, followed by an increase in verbalized achievement fantasies by the (male) subject (Atkinson & Raynor, 1974). The use of the original pictorial cues from the Thematic Apperception Test has been modified in recent studies to the use of verbal cues in the form of sentence and paragraph completion tests. A high correlation between the two methods has been found;

however, Elliot (1973) has found that pictures elicit significantly higher amounts of imagery than verbal cues alone.

There are some methodological problems involved in the use of thematic apperceptive measures to assess fear of success imagery. First of all, the assumption is that the subjects have at least a modicum of verbal ability. Second, the TAT measure is sensitive to situational differences at the time of its administration. Most importantly, the cues selected have important effects on the motivational content of the stories (Veroff, Atkinson, Feld, & Gurin, 1974). Horner (1968) selected the "Anne in medical school" cue to explore female responses to competition in a field traditionally populated with a large majority of males. Males in her sample responded to a "John in medical school" cue. Veroff et al. (1974) also used different cues depending upon the sex of the subject. The precedent for giving alternate cues to male and to female subjects is a long-standing, basic process in the administration of the TAT, both as a personality measure and as a measure of achievement motivation. The assumption is that a person projects him or herself into the scene of the verbal or pictorial cue and identifies with the character described there (Cronbach, 1960).

Several attempts have been made to expand upon the "motive to avoid success" by having subjects respond to an opposite sex cue. Monahan et al. (1974) suggest that matching the actor in the cue (Anne or John) with only same-sexed subjects disguises the factor responsible for the experimental effect. That is, it is impossible to determine whether it is the sex of the actor in the cue or the sex of the subject that is responsible for the fear of success imagery. If cues are presented in a

crossed design: females responding to the "Anne" cue; females responding to the "John" cue; males responding to the "John" cue; males responding to the "Anne" cue, two explanations can be tested. First, if only females respond with significant fear of success imagery, an explanation of a basic, relatively stable personality trait unique to females could be posited. Secondly, if fear of success imagery occurs towards the female cue but from both sexes, an alternate explanation involving the cultural stereotyping of sex-role behaviors would be plausible.

In a pilot study, Cherry and Deaux (1975) allude to the cultural stereotype explanation. They suggest that it is not femininity and achievement that are inconsistent, but femininity and specific types of achievement-oriented roles which have traditionally been male-dominated. That is, women write with much less fear of success orientation when they respond to Anne's being successful in nursing school. In contrast, males indicate "fear" when they respond to "John" in nursing school. Thus, fear of success imagery appears to be dependent on the sex-role content of the cue.

In summary, the traditional experimental methods for studying achievement motivation could be replicated with consistency only for males. Females tended to display avoidance of success imagery, even those females who appeared highly motivated and successful. The questions which remain unanswered in the literature are these: Is there a female trait which produces fear of success imagery when women imagine themselves to be in highly competitive situations? Is this trait stable throughout a female's developmental history or is it subject to change with situational changes? Can the fear of success imagery

displayed on the TAT projective test be explained in terms of a predominant cultural stereotype alluded to within the cue itself?

III. METHOD

Subjects

The subjects were 189 students drawn from six public school and two college classrooms in a small Midwestern community (pop. 5,000). Five of the seven schools in the community were represented. Classrooms were selected on the basis of teacher willingness to cooperate. Two classrooms were selected to represent each of the following academic levels: fifth grade (N=48), eighth grade (N=51), high school juniors (N=53), and college students (N=37). The sex distribution (M=90; F=99) occurred by chance.

Measures

Each subject was given a four-page booklet which consisted of the following items:

Page 1. Instructions for taking the test were described in detail in vocabulary simplified enough for fifth graders to read and to comprehend. The instructions were adapted from Horner (1968) and followed procedures commonly used for assessing achievement motivation with a thematic apperceptive device (McClelland, 1953). That is, the subjects read that this was a test of creativity and imagination, that they would be writing within a prescribed time limit, and that spelling and grammatical errors would be overlooked (Appendix 1, p.36).

Page 2. Each subject received one of two possible forms of page 2, (coded in Appendix 1 as Page 2(a) or Page 2(b). The subjects were not informed that there were alternative forms to Page 2. These alternative forms (cue alternatives) were worded as follows:

Page 2(a). "After first-term finals, Anne finds herself at the

top of her medical school class."

Page 2(b). "After first-term finals, John finds himself at the top of his medical school class" (Appendix A, p. 2(a) & 2(b)).

Page 3. The questions, outline in the Thematic Apperception Test Manual (Murray, 1953) and used for administration of the TAT, were recorded verbatim and spaced equidistantly on the page to allow for written responses to each question. The questions were as follows:

What is happening? Who are the persons?

What has led up to this situation; that is, what has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done? (Appendix A, p. 3).

Page 4. A questionnaire, surveying demographic data, future goals orientation, and previous knowledge of the procedures and implications of this particular study, was administered to all subjects.

Procedure

The booklets were sorted and prearranged according to an ABBA pattern in regards to the A and B cue alternatives on Page 2. They were distributed to all members of each class by two experimenters (Es), one representing each sex. The verbal instructions were given by one E per classroom. This responsibility was alternated by the Es, each assuming leadership in one classroom at each age level.

Page 1 instructions were read orally and interpreted as necessary by the experimenter. Each subject was then instructed to turn to Page 2, to look at the cue for 20 seconds, and to proceed to Page 3 to write his/her story. After five minutes, the subjects were asked to finish

their stories, to turn to Page 4, and to complete the questionnaire. The only modification in procedure occurred with the fifth grade subjects who were given a total of ten minutes to complete their stories.

Stories were scored in a bipolar manner for the presence or absence of a "motive to avoid success". Horner's criteria (1970) for scoring fear of success imagery was used. The presence of negative imagery was scored when a story contained one or more of the following criteria:

a. negative consequences because of the success
b. anticipation of negative consequences because of the success
c. negative affect because of the success
d. instrumental activity away from present or future success, including leaving the field for more traditional female work such as nursing, school teaching or social work
e. any direct expression of conflict about success
f. denial of effort in attaining the success (also cheating or any other attempt to deny responsibility or reject credit for the success)
g. denial of the situation described by the cue
h. bizarre, inappropriate, unrealistic or non-adaptive responses to the situation described by the cue (Horner, 1970, p. 59).

The author scored all protocols according to the above criteria. An independent scorer rated 166 of the stories. The overall percentage of agreement between the two raters on the 166 stories was 87%. Items on which there was disagreement were scored blind by a third reader. The decision was made on the basis of two agreements out of three.

Design

A full factorial analysis of variance was used for three fixed independent variables: 1. sex of subject (two levels: male or female); 2. age of subject (four levels: fifth grade, eighth grade, juniors in high school, college students); 3. sex of cue (two levels: Anne or John).

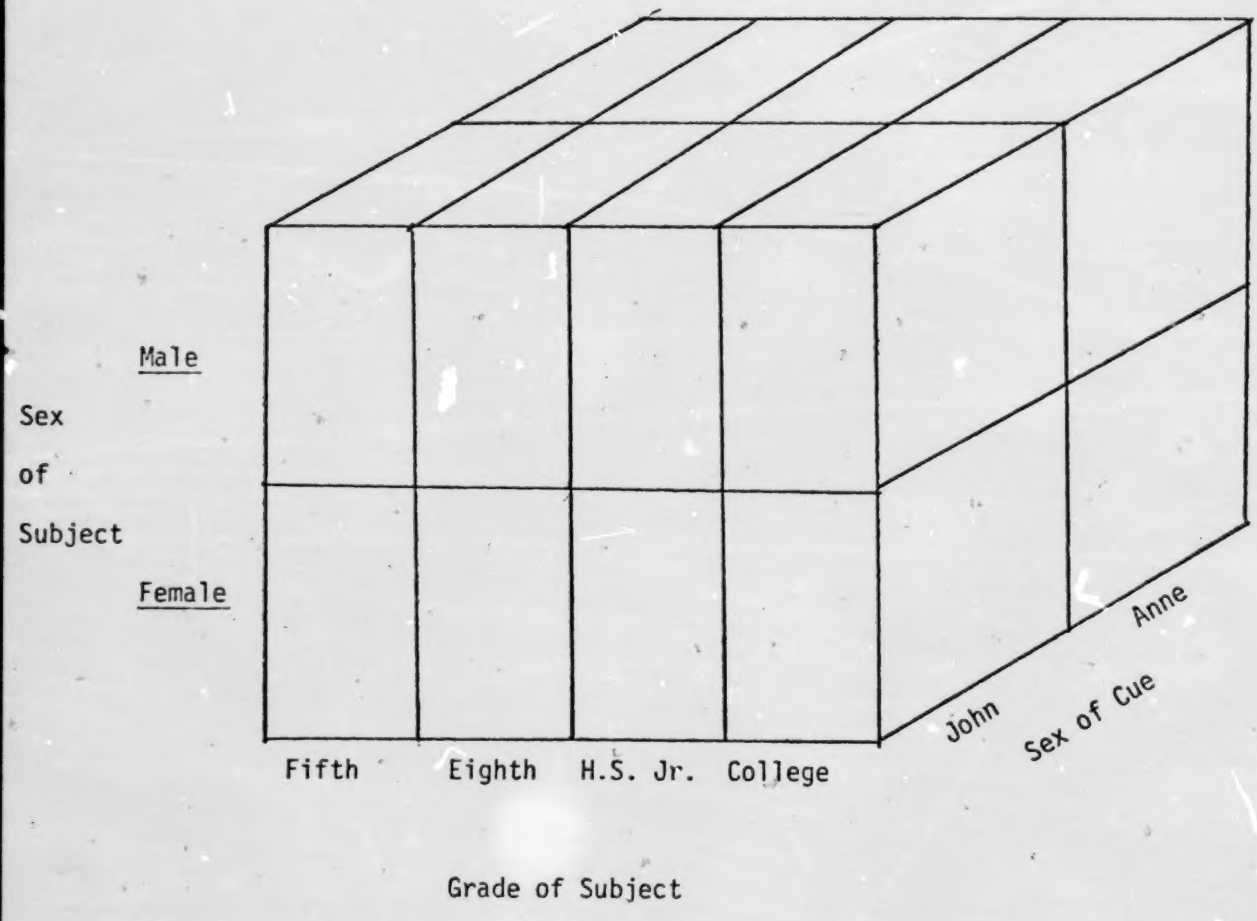
All interaction terms (sex by age, sex by cue, and age by cue; plus sex by age by cue) were analyzed. A block representation of the design is illustrated in Figure I.

Figure I

Block Representation

of Design Analysis

2 x 2 x 4 = 16 cells



IV. RESULTS

A full factorial analysis of variance was used for the three fixed independent variables: sex of subject (male or female), age of subject (fifth grade, eighth grade, high school juniors, and college students), and sex of cue (male or female). The .05 level of significance was set as a minimal criterion for rejection of the null hypotheses for all F tests. The only significant difference between groups on any of the measures was on the sex of cue variable. The "Anne" cue produced significantly more negative imagery responses than the "John" cue, $F(1, 173)=24.627$, $p < .001$. The interaction terms for sex by age, for sex by cue, for age by cue, and for sex by age by cue were not significant at the .05 level (Table 1).

The percentage of subjects in each of the sixteen cells of the experimental design who expressed negative imagery towards the success orientation aroused in the cue were as follows (Table 2):

(1) Male fifth graders tc "John" cue: 42%

(2) Male fifth graders to "Anne" cue: 73%

(3) Female fifth graders to "John" cue: 36%

(4) Female fifth graders to "Anne" cue: 79%

(5) Male eighth graders to "John" cue: 15%

(6) Male eighth graders to "Anne" cue: 69%

(7) Female eighth graders to "John" cue: 31%

(8) Female eighth graders to "Anne" cue: 42%

(9) Male high school juniors to "John" cue: 42%

(10) Male high school juniors to "Anne" cue: 64%

(11) Female high school juniors to "John" cue: 40%

Table 1

Analysis of Variance

(With each effect removed first)

Source	df	MS	F
Mean	1	47.751	
Sex	1	0.012	0.054
Cue	1	5.593	24.627*
Age	3	0.573	2.525
Sex by Cue	1	0.012	0.053
Sex by Age	3	0.084	0.369
Cue by Age	3	0.030	0.133
Sex by Cue by Age	3	0.273	1.202
Error	173	0.227	
Total	189		

*p <.001

Table 2

Summary of Percentages of Negative Imagery

Expressed by Subjects by Grade Level

Grade	Total n	Sex	Cue	% of Negative Imagery
5th	48	M n=23	John n=12	42
			Anne n=11	73
		F n=25	John n=11	36
			Anne n=14	79
8th	51	M n=26	John n=13	15
			Anne n=13	69
		F n=25	John n=13	31
			Anne n=12	42
H.S. Juniors	53	M n=26	John n=12	42
			Anne n=14	64
		F n=27	John n=15	40
			Anne n=12	83
College	37	M n=15	John n=9	33
			Anne n=6	83
		F n=22	John n=11	27
			Anne n=11	55

(12) Female high school juniors to "Anne" cue: 83%

(13) Male college students to "John" cue: 33%

(14) Male college students to "Anne" cue: 83%

(15) Female college students to "John" cue: 27%

(16) Female college students to "Anne" cue: 55%

Hypothesis 1

Ninety males wrote negative imagery stories 51% of the time. Ninety-nine females produced negative imagery on 50% of the stories (Table 3). Thus, there was no significant difference in the amount of negative imagery expressed by male and by female subjects (F 1, 173=<1). The hypothesis that there will be no significant difference between male and female subjects in the amount of n Avoid success imagery displayed could not be rejected (Table 1). The 48 fifth graders produced negative imagery to the story cue 58% of the time. Fifty-one eighth graders included negative imagery in 39% of their stories. The 53 high school juniors displayed negative imagery 57% of the time. College students, (N=37) wrote negative imagery stories 46% of the time (Table 3).

Hypothesis 2

Although there was some fluctuation in the amount of negative imagery displayed between age levels of subjects, no linear trend of increasing age with increasing or decreasing strength of the n Avoid success motive could be ascertained. Also, there was no significant difference in mean scores between high school and college age subjects. Visual inspection of the mean difference scores between the female college students responding to the "Anne" cue and the female high

Table 3

Group Means for Expression of

Negative Imagery on Sex, Age, and Sex of Cue Variables

Variables	N	Mean
Sex:		
Male	90	.51111
Female	99	.50515
Age:		
Fifth	48	.58333
Eighth	51	.39216
H.S. Juniors	53	.56604
College	37	.45946
Sex of Cue:		
Anne	93	.66019
John	96	.35003

Total N = 189

Grand Mean = .50265

school students responding to the "Anne" cue shows a decrease in negative imagery at the college level. Male respondents to Anne in both of these age groups exhibited an opposite trend: high school males responded less negatively to the "Anne" cue than did college males. These trends could not be considered significant, however; they were only representative of the general amount of fluctuation in both directions among any comparison of age group pairs. The hypothesis that the age of the subject will have no significant effect on the amount of negative success imagery expressed could not be rejected (Table 1).

Hypothesis 3

For both sexes and all age group categories, the proportion of negative responses to the Anne cue was significantly higher than the proportion of negative responses to the John Cue, $F(1, 173) = 24.627$, $p < .001$. Of the 96 subjects who responded to the "John" cue, 35% wrote stories expressing negative imagery. In contrast, 93 students responded with negative imagery in 66% of the stories about Anne (Table 3). Thus the null hypothesis that the type of cue used (male or female) will not have a significant effect on the amount of negative success imagery displayed was rejected. (Reduced model, Table 4).

Hypothesis 4

There was no evidence of a sex by age interaction effect in the amount of negative imagery displayed by either sex at any age level, $F(3, 173) = < 1$. Thus, this hypothesis was not rejected (Table 1).

Hypothesis 5

Forty-six male subjects in the present study responded to the "John" cue, resulting in negative imagery on 35% of the stories.

Table 4

Analysis of Variance

(Reduced model)

Source	df	MS	F
Mean	1	47.751	
Cue	1	5.593	24.627*
Error	187	0.223	
Total	189		

$p < .001$

Forty-four males responding to the "Anne" cue wrote negative imagery responses 72% of the time. Females responded in a very similar pattern: 34% of the stories recorded negative imagery when writing to the "John" cue (n=50), and 66% recorded negative imagery towards "Anne" (n=49) (Tables 2 and 3). Interaction effects between the sex of the subject and sex of the cue were not significant $F(1, 173) = <1$. The hypothesis that there would be no sex by cue interaction could not be rejected.

Hypothesis 6

No age by cue interaction effects were supported, $F(3, 173) = <1$. Therefore, this hypothesis could not be rejected (Table 1).

Hypothesis 7

The hypothesis that there will be no three-way interaction effect (sex by age by cue) in the amount of negative success imagery measured could not be rejected, $F(3, 173) = <2$ (Table 1).

Due to non-orthogonality of the groups representing the sixteen independent variables being tested, an analysis of variance was performed two ways: first, with each effect removed first, and second, with each effect removed last (Table 1 and 5). The similarity of F test results in Tables 1 and 5 are apparent by visual inspection alone and indicate that the results were not dependent upon the order in which the variables were analyzed.

The results of this study closely replicated Horner's 1968 results in respect to females: 66% of the females writing to the "Anne" cue responded negatively, compared to 65% for Horner. The negative male response to the "John" cue was 35%, considerably higher than the 9% reported by Horner in 1968. These results suggest a continuing trend in

Table 5

Analysis of Variance

(With each effect removed last)

Source	df	MS	F
Mean	1	47.751	
Sex	1	0.060	0.264
Cue	1	5.590	24.612*
Age	3	0.370	-1.627
Sex by Cue	1	0.081	0.356
Sex by Age	3	0.128	0.563
Cue by Age	3	0.010	0.042
Sex by Cue by Age	3	0.272	1.196
Error	173	0.227	
Total	189		

*p <.001

the direction of more fear of success imagery being displayed by males toward the male success model than first exhibited, (9% in 1968, Horner; 21% and 22% in 1974, Monahan et al., and Brown et al. respectively; 35% in 1975 in this present study) while female negative imagery has remained consistently high (Table 6). Also supported in this study is Horner's statement in 1972 (Horner, 1972) that a major change in the display of negative success imagery in the past several years, compared to her original study, has been in the direction of more negative responses from males towards the male cue.

Table 6

Comparison of Fear of Success Imagery in Studies

(Disregarding age variables and sample size)

Sex of Subject	Study	Sex of Cue	
		John	Anne
Males	Horner (1968)	9%	*
	Alper (1974)	*	62.5%
	Brown et al. (1974)	22%	42%
	Monahan et al. (1974)	21%	68%
	Present study (1975)	33%	72%
Females	Horner (1968)	*	65%
	Alper (1974)	50%	89%
	Brown et al. (1974)	19%	30%
	Monahan et al. (1974)	29%	63%
	Present study (1975)	34%	65%

*Sample not tested

V. DISCUSSION

Hypothesis 1 was supported. At the .05 level of significance no significant difference was found. Male and female respondents displayed equivalent amounts of negative success imagery. These results would seem to argue against the "intrapsychic" explanation of the fear of success as a phenomenon unique to women and as being the precipitating factor in female success avoidance. Apparently, males, as well as females, show fear of success with a frequency similar to that of females.

Previous research, for instance Alper (1974), interpreted results of 50% or more negative imagery displayed by women towards both male and female cues as being indicative of low female expectations of success for both sexes. Although a sample of males writing to the "John" cue was eliminated in her study, it would seem only realistic to apply the same explanatory criterion to female and male results in this present study. Using Alper's interpretation of the results, this research displays low expectations of success for males and for females by both boys and girls, men and women. An alternative hypothesis that includes success avoidance by both sexes is needed to explain these data.

Hypothesis 2 was supported. No significant difference was found between age groups, using the .05 significance level. The percentage of stories expressing negative imagery at the lowest grade level tested, fifth grade, was 58%. Already at this age, more than half of the students were writing negative success stories to either cue. There were fluctuations in percentage of negative imagery between age groups, but they were not significant, nor did they follow any linear trend. From these data, one could state that the display of negative imagery on this particular

instrument remained fairly constant and was not influenced by the developmental process from childhood to adulthood, at least within these age ranges. Allowing for vocabulary differences, the content and message of negative success imagery for fifth graders and for college students remained the same.

Examples of protocols displaying negative imagery towards the "Anne" cue among fifth graders and among college students of both sexes follow:

Fifth Graders:

> "She doesn't no (sic) what she is going to do. Because she doesn't no (sic) if she wants to be a doctor. She wants to be a doctor now. But she doesn't think she can go on." (expression of conflict)
>
> "Pam and Anne were real good friends ever since they were 9 or 10; Pam does not like Anne anymore. Pam wants to be where Anne is." (negative consequences)
>
> "No one ever liked her at all because she was very ugly."

College Students:

> "Anne had no self-confidence and was surprised to find herself at the top of her class for a grade-point average of 4.0. Anne was always a good student in the elementary and secondary level. But she never had many friends, especially boys, and (was) discovered to be terribly lonely."
>
> "Anne just went into the science building....and saw her computed GPA. She saw that she was at the top of the list. (Of course, she was listed by her student number, so that other students wouldn't become jealous and envious of her and do something drastic to her.)"

It appears that whatever it is that leads to writing negative success imagery on protocols is present in both boys and girls before the fifth grade and well-verbalized before career and vocational choices are made.

Hypothesis 3 was rejected at the .001 level of significance.

Males and females across groups displayed significantly more negative imagery towards the successful female cue than towards the successful male cue.

These highly significant results would appear to support an explanation regarding traditional cultural role expectations. Females in medical school may be considered to be leading atypical, anti-traditional feminine roles. Thus, the "Anne in medical school" cue arouses negative imagery about Anne, her feelings about herself and her future as a career doctor. She is seen in the stories as being different from most females and is not respected or well-liked by her peers of both sexes. This cue apparently aroused so much anxiety towards Anne and the success she was displaying in her atypical pursuit that several subjects denied the cue altogether, allowing her instead to pursue a nursing career in the future.

Additional evidence of the cultural stereotype of occupational roles may be seen in the responses toward the male cue. The "John in medical school" cue suggests a fairly typical role stereotype for males with ability. Not only did the "John" cue receive fewer negative imagery responses by both sexes, but also, subjects tended to credit John with a "positive view" of success. It is apparent that negative imagery in this study is dependent upon the content of the cue. As Cherry and Deaux (1975) have suggested, it may also be dependent upon the sex-role content of the cue, since the only alterations between cue A and cue B were the words "Anne" or "John", "herself" or "himself". Thus, one may ask: Which is more important; that the cue person is "successful" or that he/she is in a sex-appropriate role?

The results of this part of the study make an "intrapsychic" explanation particularly questionable. If the motive to avoid success stems from an "intrapsychic" phenomenon which produces anxiety, it would seem reasonable to suppose that this would occur when subjects are responding to their same-sex cue. A basic assumption is made that the subject will identify with this same-sex person in the cue and, therefore, the resultant feelings, thoughts, and subsequent actions (represented here in verbal fantasy) will reflect his/her own feelings when projected into that situation. This may explain the results of negative imagery displayed when the sex of subject and sex of the cue are identical. The "intrapsychic" explanation of the motive to avoid success is not in conflict with the results of female responses to female cues. Likewise, male responses to male cues containing moderate amounts of negative imagery towards this type of male success could be interpreted in a similar way. However, it does not explain the results when the sex of subject and the sex of cue are opposite. In fact, according to the theory, one might expect that much less anxiety would be expressed towards opposite sex cues because both the identification and the anxiety would be lacking. The subject of the cue is unlike the subject responding; therefore, it would be expected that the story writer, regardless of sex could compose a story in a more objective manner. While the female responses to female cues would support this line of reasoning, male results do not. The following questions seem to be unresolved. Why is it that males respond with a much higher percentage of negative imagery to the "Anne" cue than to their own-sex cue? No "intrapsychic" explanation of the males' high negative imagery towards the female cue is available within the theoretical framework of the motive under study. Why do both females and males

produce moderate amounts of negative imagery to the male cue? In similar manner, Alper's (1974) explanation that females' fear of success anxiety affects written responses to male success cues only explains the female results of the latter question.

Horner's original study (1968) did not include a crossed subject and crossed cue design; thus, there can be no check on her results involving sex of cue vs. sex of subject response dependency. Perhaps her very design led to her "intrapsychic" interpretation, as Monahan et al. (1974) seem to suggest. More importantly, the "intrapsychic" interpretation of motivation in general seems to have led to research designs involving only subjects and same-sex cues. Thus, there seems to be a methodological problem involved. When subjects are tested on same-sex cues, they produce responses which can be interpreted intrapsychically; when they receive opposite-sex cues, the alternate explanation of cultural-stereotyped responses seems to provide a better explanation It appears scientifically illogical to interpret the results of identical treatments in two different ways. The cue dependent hypothesis that the sex-role implications of the cue affect the outcome of the negative imagery displayed appears to be the most powerful one to explain all research findings so far conducted rather than just some of the findings. Thus, it may not be femininity and attitudes towards success that are described here, but rather femininity and responses to specific types of achievement-oriented roles which have traditionally been male-dominated. Possibly no one fears success as much as they do sex-role inappropriateness.

Hypotheses 4 through 7, those concerned with the interaction effects of the three variables under consideration, were not significant at the designated level. The fact that there were no interaction effects

adds further credibility and interest to the explanation of the main effect for sex of cue as the significant variable.

Summary

The "motive to avoid success," as measured by a projective test using verbal cues to elicit imagery, appears to have changed since 1968. It appears now to be a phenomenon that is longitudinally stable, as evidenced by the insignificant change between age levels. There is no significant difference in the production of this "motive" across sexes. This also is a new finding mainly indicating that males have increased in negative success imagery. The production of negative imagery varies significantly in amount only when the cue is changed from one sex to another. When this occurs, it is the feminine cue which elicits the most negative imagery responses from both sexes. The phenomenon appears, therefore, to be extremely cue dependent, possibly more dependent upon the sex of the cue subject than upon the success of the cue subject. These results suggest that cue dependency is related to the sex-role expectations of the subject who is responding to this particular cue, regardless of the sex of the respondent. Furthermore, such culturally determined sex-role expectations are well-established by the time a child is in fifth grade. In a small community in the Midwest these expectations are still very traditional, stereotyped and unaffected by social change.

VI. SUGGESTIONS FOR FURTHER RESEARCH

The summary and supporting data suggest that the theory of the "motive to avoid success" needs to be re-examined. It appears that the assessment of role stereotypes is being measured. The additional question should be asked: Is a motive also being displayed? Differential cue manipulations are suggested, some involving gender inconsistent roles for males (e.g. nursing or pre-school teaching). If subjects are responding solely to the occupational cue as it supports or refutes their sex-role identity, one may find males exhibiting great "fear of success" towards traditionally feminine occupations. In addition, cues involving successful and unsuccessful goal completion could be crossed as variables within the design.

Post hoc inspection of the data indicates that a sex by sex of cue interaction effect could be illustrated graphically, using a "sex" by "same or opposite-sex" cue label. This, however, is an example of nested data: interesting to speculate about, but impossible to interpret within the present design limitations. To fully test the cultural stereotypic explanation suggested in this study, a design using each subject in each condition would be preferable. If subjects are responding to a cultural stereotype of one sex in the cue, then they ought to respond according to the stereotype traditional to each sex, if given both cues. The problem, then, would become one of controlling for set because varying the sex of cue for the same subject may make the hypotheses obvious and might lead to bias.

The present measure used to score fear of success imagery eliminated, by virtue of its verbal difficulty level, any subjects below the

ages of nine or ten. To examine the stability of the phenomenon under consideration with young children, one would need to measure audible verbal responses alone. One suggestion would be the use of a tape recorder to capture verbal imagery from young subjects in response to audible cues from the experimenter.

Explorations of a more objective measure and a more precise scoring technique appear necessary. The demand characteristics of the situation using the present method seem loosely controlled, allowing intervening variables, such as experimenter and scorer bias, to fluctuate at will.

Finally, a repetition of this study in a metropolitan setting may result in rather different findings and give us an indication of sub-culture differences in respect to "the motive to avoid success."

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Appendix 1

(Adapted from Horner, 1968)

Page One

Instructions

You are going to see a sentence, and your task is to tell a story that is suggested to you by that sentence. Try to imagine what is going on. Then tell what the situation is, what led up to the situation, what the people are thinking and feeling, and what they will do.

In other words, write as complete a story as you can--a story with plot and characters.

You will have twenty (20)seconds to look at a verbal cue and then 5 minutes to write your story about it. Write your first impressions and work rapidly. I will keep time and tell you when it is time to finish your story.

There are no right or wrong stories or kinds of stories, so you may feel free to write whatever story is suggested to you when you look at the sentence. Spelling, punctuation, and grammar are not important. What is important is to write out as fully and as quickly as possible the story that comes into your mind as you imagine what is going on.

Notice that there will be one page for writing the story, following the page on which the verbal cue is given. If you need more space for writing it, use the reverse side of the previous page--the one on which the cue was presented. Do not turn or go on to the next page until I tell you to do so.

"After first-term finals, Anne finds herself at the top of her medical school class."

"After first-term finals, John finds himself at the top of his medical school class."

What is happening? Who are the persons?

What has led up to this situation; that is, what has happened in the past?

What is being thought? What is wanted? By whom?

What will happen? What will be done?

Questionnaire

1. Age _____ 2. Sex M____ F____ 3. Grade_____

4. Marital Status: Single: Unattached as yet _____Going steady _____
   Engaged _____
   Married _____ How long_____ years.

5. How many children are there in your family? _____ brothers
   _____ sisters
   How many are younger than you? _____brothers _____sisters
   How many are older than you? _____brothers _____sisters

6. What is your father's occupation? _____

7. What is your mother's occupation? _____

8. What is your overall grade point average? _____

9. What is your major? _____

10. What are your educational goals? i.e. how much education and in what area? _____

11. What is your present vocational goal once your education is completed?

    _____
    How many years have you had this goal?_____

12. How certain are you now that you will be able to attain your present vocational goal? a. almost a certainty b. very likely c. better than 50-50 chance d. less than 50-50 chance e. unlikely f. very unlikely

13. How many times in the past two years have you changed your mind about vocational choice? a. none b. once c. twice d. 3 or 4 times e. 5 or more times

14. How important do you think the attainment of your vocational goals will be to your satisfaction in later life?
    a. the most important thing
    b. next in importance only to my family
    c. pretty important but I still could be content if I did not reach these goals
    d. my vocational goals are pretty much secondary to my other interests in life
    e. not very important at all

15. What do you suppose was the purpose of this experiment?

16. Did your conclusions about the experiment influence your performance? yes _____ no _____